



International Journal of Research in Finance and Management

P-ISSN: 2617-5754
E-ISSN: 2617-5762
IJRFM 2024; 7(2): 470-473
www.allfinancejournal.com
Received: 10-10-2024
Accepted: 12-11-2024

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Analysing the relationship between axis bank stock performance, nifty fifty, and nifty bank indices: A comparative study

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DOI: <https://doi.org/10.33545/26175754.2024.v7.i2e.396>

Abstract

Background: The correlation between Axis Bank stock performance and the Nifty Fifty and Nifty Bank indices is analyzed.

Objective: These observations were taken to see the relationship that exists for the last five years between the prices of these two indices with Axis Bank's stocks.

Materials and Methods: Data for this were derived from the NSE website from 1st April 2020 to 14th November 2024. An analysis was conducted using Spearman's Rank Correlation and descriptive statistics.

Results: Strong positive correlations between Axis Bank and Nifty Fifty with a correlation coefficient of 0.968 and Nifty Bank with a correlation coefficient of 0.978 with associated p-values < 0.001.

Findings: Axis Bank's stock performance is significantly correlated with both broader market trends and sector-specific developments.

Conclusion: Monitoring of both indices is recommended to devise an investment strategy in Axis Bank.

Keywords: Nifty fifty, nifty bank, axis bank, correlation

Introduction

Performance of the stock markets is an essential indicator for economic health and investor sentiment. In this light, the analysis of individual stocks with references to broader indices in the market provides great inputs into the dynamics of finance and the resultant investment strategies. The paper sets out to analyze the relationship between the performance of Axis Bank stocks and two of the largest market indexes-the Nifty Fifty and the Nifty Bank.

Axis Bank is one of the biggest financial institutes of India and a strong player in the banking sector, and subsequently, in the general market as well. The Nifty Fifty index represents an adequate balance of fifty large, reputable companies belonging to different industries that mirror the overall market. However, the Nifty Bank index covers only the banking sector with the performances of major Indian banks.

The interaction between these indices and stock performance of Axis Bank would then become an important aspect for investors, market analysts, and even policymakers. It might remind them of the macroeconomic influences, sector-specific events, and firm-specific factors which have an impact on the movement of stock prices. This comparative study, therefore, analyses the correlation between the movement of the stock price of Axis Bank with the Nifty Fifty and the Nifty Bank indices over five years.

Given this, focus would be put on these relationships in order to contribute to a better understanding of market dynamics and of providing actionable strategic investment decisions within the banking sector.

Objectives of the Study

- To examine the correlation between the stock performance of Axis Bank and the Nifty Fifty index.
- To assess the correlation between the stock performance of Axis Bank and the Nifty

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Bank index.

- To compare the strength of the relationship between Axis Bank's stock performance and the two indices: Nifty Fifty and Nifty Bank.
- To provide insights on how the correlations can inform investment strategies involving Axis Bank and the broader market indices.

Methodology of the Study

The data used in the study is from 1st April 2020 to 14th November 2024; it has been obtained from a dataset sourced from the NSE website. The analysis is done mainly to correlate Axis Bank with two major indexes, Nifty Fifty, and Nifty Bank. The procedure applied has been the detailed analysis of correlation with a view to the estimation of the strength and nature of such relationships. This chapter makes use of descriptive statistics, such as mean, median, standard deviation, Range and Interquartile Range in summarizing and understanding central tendencies and variability within the dataset. Such a dual approach of correlation analysis and descriptive statistics offers a very powerful framework for investigating the dynamics between Axis Bank's stock performance and the selected indices, thus providing valuable insights to investors and market analysts.

Significance of the Study

This study is significant because of the very detailed analysis it gives regarding how the stocks of Axis Bank are interrelated with the Nifty Fifty and Nifty Bank indices over five years. Through this, in turn, it indicates very useful insights regarding how the value of the Axis Bank stock is affected by larger market trends and sector-specific happenings. This analysis not only helps investors make informed decisions but contributes to a greater understanding of financial dynamics within the Indian banking sector as a whole. These findings can support market analysts and policymakers in identifying patterns and therefore the possible impacts, which will help in more effective investment strategies and economic planning.

Review of Literatures

Mukherjee and Mishra (2007) ^[1] examine Indian equity markets response to international equity price movements, using data from 23 countries for a period of 16 years. They estimated the existence of significant intermarket relationships and increasing integration over time to enhance market efficiency. Shubiri (2010) ^[2] determines stock price indices of Jordanian commercial banks in the period from 2005 to 2008. It showed positive relationships among the two parameters under study-namely, net asset value per share, dividend percent, and GDP-and negative impacts from inflation and lending interest rates. Paramati and Gupta (2011) ^[3] investigate the causality between stock market performance and economic growth. Their study identifies influence of economic growth on stock market development along long-run and short-run dynamics, making it highly informative for formulation of policy and investment decisions. Sakthivel et al. (2012) ^[4] employed the Bivariate GARCH model to study correlation and volatility spillovers in major international stock markets from the period of 1998-2011. The authors found the long-

run co-integration among the global indices and volatility spillover both ways between US and Indian markets, which describes their economic integration.

Kalama (2013) ^[5] did an analysis of the firm-listed companies relationship on the Nairobi Securities Exchange with their earnings for the period of 2007 to 2012. The study was able to ascertain that there were good and significant positive associations between EPS, DPS, and PBV and share prices. Notably, DPS had a more influential positive effect compared to EPS. Conversely, price/earnings, P/E ratio, and payout ratio, POR, demonstrated no significant association. Komo and Ngugi (2013) ^[6] examined the effect of bank share prices on national stock market indices during and after the 2008/09 credit crisis. Their results indicated that the indices for the respective countries reacted similarly: mean indices were significantly higher before the crisis compared with during the crisis. Kumar and Murugan (2013) ^[7] presented an analysis of the performance of Indian stock market indices using neural network time series models. According to their study, they found out that a hybrid model combining statistical models with ANNs can help improve forecasting precision for indices such as BSE and NIFTY MIDCAP50.

Sharif et al. (2015) ^[8] analyzed share price determinants in the Bahrain financial market through the use of a panel dataset spread over 41 firms in the period of 2006-2010. The study revealed return on equity, book value per share, dividend per share, dividend yield, price earnings, and firm size as statistically significant determinants of share prices.

Ruhani et al. 2018 ^[10] stated that market capitalization has a positive effect on stock prices, and price-earnings multiples have a negative effect. They further discovered a cointegrating relationship between the stock prices and trading volume where the latter becomes the risk source. Gupta et al. (2018) ^[9] analysed NIFTY 50 constituents and used a neural network model to predict individual stock prices with an emphasis on raw material dependency. The analysis given by this study helps in understanding the macroeconomic variables and their relation to company performance, thus making the financial forecasting more accurate. Salameh and Ahmad (2020) ^[11] note how stock market development is positively related to economic growth, leaving one to realize the importance of understanding determinants for policy-making. Specifically, they highlight the great relative contribution of emerging markets to world stock market expansion over the past thirty years. Meher et al. (2022) ^[12] employed a VAR model for verifying if energy sector stocks, commodity prices, and market indices do have a link, with particular interest in the significance of crude oil and NIFTY ENERGY before and after COVID. Overall, it thus provides some insight aspects about the interaction patterns between commodity price hikes and the stock performances of the energy sector.

Table 1: Data Analysis and Results

	Axis Bank Stock	Nifty Fifty Index	Nifty Bank Index
Shapiro-Wilk W	0.975	0.975	0.957
Shapiro-Wilk p	< .001	< .001	< .001

Source: Researcher's compilation from secondary Data

The Shapiro-Wilk test checks for the normality of the

datasets of Axis Bank, Nifty Fifty, and Nifty Bank. The Shapiro-Wilk W values were 0.975 for Axis Bank, 0.975 for Nifty Fifty, and 0.957 for Nifty Bank. Their corresponding p-values are all less than 0.001, indicating that the data of Axis Bank, Nifty Fifty, and Nifty Bank do not follow a normal distribution. This lack of normality in the datasets, therefore, recommends non-parametric statistical methods as more appropriate than others used later for succeeding analyses to ensure the validity and reliability of findings.

Table 2: Descriptive Statistics:

	Axis Bank	Nifty Fifty Index	Nifty Bank Index
Mean	822	17511	38403
Median	789	17578	38728
Standard deviation	228	3944	8722
IQR	304	4261	10041
Range	992	18132	37126

Source: Researcher’s compilation from secondary Data

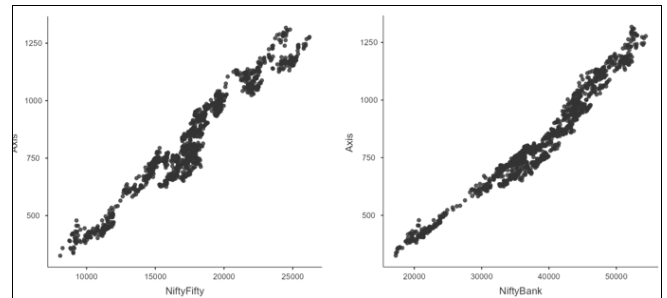
Descriptive statistics for Axis Bank, Nifty Fifty, and Nifty Bank during the five-year period from 1st April 2020 up to 14th November 2024 would depict all the important information regarding their performances as well as the volatilities associated with them. Axis Bank's mean share price was at ₹822 during the period. Median was at ₹789, thus indicating a slight skew. The standard deviation of ₹228 is suggestive of moderate volatility, with the IQR of ₹304 and the range of ₹992. In comparison, the mean of Nifty Fifty index worked out to be ₹17,511 with a median of ₹17,578, with almost negligible skewness but higher volatility as manifested in the standard deviation of ₹3,944, an IQR of ₹4,261, and a range of ₹18,132. The Nifty Bank index had a variability of ₹38,403 with a mean while its median went at ₹38,728. Its standard deviation stands at ₹8,722, while its IQR is ₹10,041, and range was ₹37,126. This shows the occurrence of vast movements in the banking sector. The above descriptive statistics will form a platform for further research on the association between these variables, as illustrated in the following parts of this paper.

	Df	Pearson's r	p-value
Axis Bank Vs. Nifty Fifty Index	1147	0.968	< .001
Axis Bank Vs. Nifty Bank Index	1147	0.978	< .001
Nifty Fifty Index Vs. Nifty Bank Index	1147	0.977	< .001

Source: Researcher’s compilation from secondary Data

The correlation matrix has captured the interrelation that existed regarding the stock performance of Axis Bank, Nifty Fifty, and Nifty Bank indices within the five-year period. The Pearson correlation coefficient between Axis Bank and the Nifty Fifty is 0.968. The p-value is less than 0.001, which creates a very strong positive statistical correlation. The Pearson correlation coefficient of Axis Bank and Nifty Bank is 0.978 with a p-value lesser than 0.001, implying an even stronger and statistically valid positive correlation. Furthermore, the correlation of the Nifty Fifty and Nifty Bank indices for themselves is also 0.977 with a p-value lesser than 0.001, which further deepens strong relations between these market indicators. This would imply that the performance of Axis Bank's stock would closely track the evolution of both the overall market as captured by the Nifty

Fifty and the banking sector as captured by the Nifty Bank index. Such a high correlation generally would indicate that movements in the price of Axis Bank's stock would strongly be in step with these indices, thereby offering profound value to investors and analysts in the study of market trends.



Source: Researcher’s compilation from secondary Data

Comparison of the Strength of Relationships

This correlation analysis shows that the stock performance of Axis Bank has a very strong positive relation with both the Nifty Fifty and Nifty Bank indices. The Pearson correlation coefficient of Axis Bank with Nifty Fifty is 0.968 and that for the correlation with Nifty Bank is slightly more at 0.978. Both the correlations are statistically significant with p-values less than 0.001. This suggests that the price movements of the Axis Bank stock are actually more aligned with the Nifty Bank index since it is bound to reflect sector-related trends better than the Nifty Fifty would, which represent the broader market trends. Minor difference in the strength of correlation does not account for the fact that both indices, in no way, do not have a marked influence on the performance of the Axis Bank stock. However, the Nifty Bank index has a slightly stronger impact.

Discussion and Findings

Correlation analysis establishes that the stock performance by Axis Bank reveals a very strong positive relationship with both the Nifty Fifty and Nifty Bank indices. The Pearson correlation coefficient for Nifty Fifty was 0.968 and for Nifty Bank at 0.978, which are highly significant at $p < 0.001$. This therefore establishes that Axis Bank's stock closely follows trends for not only the general market but also the banking sector as a whole.

While this correlation is marginally stronger with Nifty Bank, the onus of sector-specific factors being a little more important for axis bank stock price changes is reported. The investor can use these correlations to enhance his strategies- he can track how these indices are moving forward in anticipation of the movement in Axis Bank's stock. Investors can thus track the overall market as well as the sector-specific trend and make better decisions or manage risks.

It also points towards a requirement to study the overall sector dynamics in combination with market-wide trends. The high correlation with Nifty Bank Index signifies that Axis Bank is performing in tandem with general market trends but is, in fact being pretty much influenced by the specific banking sector developments. This kind of overlap between the two helps investors predict their movement in the stock of Axis Bank, which means their investments are optimised further by their own understanding from both of

these indices.

Conclusion of the Study

The linkage between the stock performance of Axis Bank and Nifty Fifty and Nifty Bank indices over five years has been probed and investigated successfully. Strong positive relationships that translate that the stock prices of Axis Bank movements closely follow the market and industry trends are revealed by Pearson's correlation coefficient values of 0.968 and 0.978, respectively. These results imply that the stock of Axis Bank is highly sensitive to general market conditions and to sector-specific results. The outcome can then be used to better investment strategies. The strong correlation of Axis Bank's stock with the selected indices will benefit the investors. Macro- and sectoral factors, therefore, play critical roles in the decision-making processes used to invest.

References

1. Mukherjee K, Mishra RK. International stock market integration and its economic determinants: A study of Indian and world equity markets. *Vikalpa*. 2007;32(4):29-44.
2. Al-Shubiri FN. Analysis of the determinants of market stock price movements: An empirical study of Jordanian commercial banks. *Int J Bus Manag*. 2010;5(10):137.
3. Paramati SR, Gupta R. An empirical analysis of stock market performance and economic growth: Evidence from India. *Paramati SR, Gupta*. 2011;133-49.
4. Sakthivel P, Bodkhe N, Kamaiah B. Correlation and volatility transmission across international stock markets: A bivariate GARCH analysis. *Int J Econ Finance*. 2012;4(3):253-64.
5. Kalama DJ. The relationship between earnings and share prices of firms listed at the Nairobi Securities Exchange [doctoral dissertation]. Nairobi: University of Nairobi; 2013. Available from: <http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/59754>
6. Komo L, Ngugi I. Behaviour of bank share prices and their impact on national stock market indices: Comparing countries at different levels of economic development during recessionary and non-recessionary periods. *Int J Econ Finance*. 2013;5(3):49-61.
7. Kumar DA, Murugan S. Performance analysis of Indian stock market index using neural network time series model. In: 2013 International Conference on Pattern Recognition, Informatics and Mobile Engineering; c2013 Feb; 72-8. IEEE.
8. Sharif T, Purohit H, Pillai R. Analysis of factors affecting share prices: The case of Bahrain Stock Exchange. *Int J Econ Finance*. 2015;7(3):207-16.
9. Gupta DK, Singh RM, Jain VR. Analysis and forecasting of individual stock prices of various constituents in NIFTY 50. In: 2018 First International Conference on Secure Cyber Computing and Communication (ICSCCC); 2018 Dec; 315-21. IEEE.
10. Ruhani F, Islam MA, Ahmad TST, Quddus MR. Effects of financial market variables on stock prices: A review of the literature. *J Mod Account Auditing*. 2018;14(11):597-610.
11. Salameh S, Ahmad A. A critical review of stock market development in India. *J Public Aff*. 2022, 22(1).
12. Meher BK, Hawaldar IT, Kumar S, Gupta AK. Modelling market indices, commodity market prices and stock prices of the energy sector using VAR with variance decomposition model. *Int J Energy Econ Policy*. 2022;12(4):122-30.